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⑲ 日本国特許庁 (JP)　　⑪ 特許出願公開

⑫ 公開特許公報 (A)　　昭55—35025

⑤1Int. Cl.³	識別記号	庁内整理番号	⑬公開　昭和55年(1980) 3 月11日
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31/60	ADB	6617—4C	発明の数　2
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(全 2 頁)

⑤4液状水虫治療薬及びその製法

⑳特　　願　昭53—108096
㉒出　　願　昭53(1978) 9 月 5 日
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明　細　書

1.発明の名称

液状水虫治療薬及びその製法

2.特許請求の範囲

(1) 分子量8000ないし50000のポリエチレングリコールと、分子量800ないし600のポリエチレングリコールとのほぼ等量づつを混和し、これに該混和物の重量を基準にして約80重量%までの量のサリチル酸を添加して加温溶解し、更にこの全重量を基準にして約10重量%のエタノールを添加して成る液状水虫治療薬。

(2) 分子量8000ないし50000のポリエチレングリコールと、分子量800ないし600のポリエチレングリコールとのほぼ等量づつを混和し、これに該混和物の重量を基準にして約80重量%までの量のサリチル酸を添加して加温溶解し、更にこの全重量を基準にして約10重量%のエタノールを添加することを特徴とする液状水虫治療薬の製法。

3.発明の詳細な説明

本発明は水虫治療薬に関する。更に詳しくは本発明はサリチル酸を80重量%までの高濃度で含有する常温で液状のアルコール含有量の少い水虫治療薬に関する。

水虫治療薬として従来多数のものが提供されて来たがその効力において決定的なものは未だ現われず、多くの患者から特効薬の出現が熱望されている状態である。

サリチル酸が水虫に著効を有することは従来から知られており、これまでアルコール溶液または軟膏として用いられて来た。

しかしながらアルコール溶液は患部に対して刺戟性であり、特に患部がびらん状態にある場合には患者に耐え難い苦痛を与える程である。またアルコールは揮発性であるので、この溶液を患部に塗布した後にアルコールが蒸発し、サリチル酸が結晶状態で析出する。この結晶状態のサリチル酸は皮膚内に浸透せず、治療作用を発揮しない。この現象は濃度が高い程顕著であり、したがって高

濃度溶液としてサリチル酸の効果を十分に発揮させることができない。

軟膏は刺戟作用は少ないけれど、湿潤性の患部には不適であり、油性のため衣服等を汚し易く、患部も不潔になり易い。また液状の場合と比べて効力が低い等の欠点を有する。

本発明者はサリチル酸を主剤とする水虫治療薬について鋭意研究した結果、特定の軟膏基剤によりサリチル酸が液化することを発見した。しかしてこの場合サリチル酸の含有量により、気温が或る温度、例えば18℃以下に下ると白濁する現象が生ずる。そこで本発明者は更に少量、約10重量%のエタノールを添加することにより、この白濁を防止し得ることをも発見した。斯くして本発明者は上述のサリチル酸製剤の諸欠点を克服した極めて有効なアルコール含有量の少い液状水虫治療薬の製造に成功したのである。

すなわち本発明は、分子量8000ないし5000のポリエチレングリコールと、分子量800ないし500のポリエチレングリコールとのほぼ等量づつを混和し、これに該混和物の重量を基準にして約80重量%までの量のサリチル酸を添加して加温溶解し、更に、この全重量を基準にして約10重量%のエタノールを添加して成る液状水虫治療薬及びその製法を提供するものである。

本発明の水虫治療薬は無色透明の、やや粘稠な液体であり、これを患部に1日2～3回塗布するのであるが刺戟性は殆んどなく、乾燥性、湿潤性いずれの水虫にも極めて顕著な効果を有する。

下記に臨床例を示す。

症状	治療人数	治療日数	完治人数	未完治人数	備考
軽症	80	7日～10日	80	0	
比較的重症	5	30日	5	0	
重症（十年以上の慢性）	5	約6ヶ月	4	1	未完治患者の症状もかなり好転

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PTO: 2004-0075

Japanese Published Unexamined (Kokai) Patent Publication No. S55-35025; Publication Date: March 11, 1980; Application No. S53-108096; Application Date: September 5, 1978; Int. Cl.[3]: A61K 9/08 31/60; Inventor: Akira Ota; Applicant: Akira Ota; Japanese Title: Ekijo Mizumushi Chiryouyaku oyobi Sono Seihou (Liquid Dermatophytosis Remedy and a Method for Preparation Thereof)

Specification

1. Title of Invention

Liquid Dermatophytosis Remedy and a Method for Preparation Thereof

2. Claim(s)

1. A liquid dermatophytosis remedy, characterized in that polyethylene glycol at 3000 to 5000 molecular weight and polyethylene glycol at 300 to 500 molecular weight are mixed with each other at an almost equivalent amount; using the weight of the mixture as a reference, salicylic acid at up to about 30 weight % is added to the mixture and dissolved by a heating means; using the total weight of the mixture as a reference, ethanol at about 10 weight % is further added.

2. A method for preparation of a liquid dermatophytosis remedy, characterized in that polyethylene glycol at 3000 to 5000 molecular weight and polyethylene glycol at 300 to 500 molecular weight are mixed with each other at an almost equivalent amount; using the weight of the mixture as a reference, salicylic acid at up to about 30 weight % is added to the mixture and dissolved by a heating means; using the total weight of the mixture as a reference, ethanol at about 10 weight % is further added.

3. Detailed Description of the Invention

This invention pertains to dermatophytosis remedies. More specifically, this invention relates to dermatophytosis remedies that contain salicylic acid at a high concentration up to 30 weight % and a lower amount of liquid alcohol at a normal temperature.

A variety of dermatophytosis remedies were previously offered. However, there are no remarkable dermatophytosis remedies that have been offered in terms of the effectiveness. A large number of the patients are waiting for specific remedies to be realized.

A significant effect of salicylic acid on dermatophytosis is already known. Salicylic acid is usually used in the form of alcohol solutions or ointments.

However, alcohol solutions stimulate affected areas. In particular, if erosion is seen on the affected areas, an extreme pain is given to the patients. Since alcohol is volatile, it evaporates after the solutions have been applied on the affected areas. Salicylic acid is deposited in the form of crystal. This crystalline salicylic acid does not permeate into the skin. Thus, it does not demonstrate any treating effect. This effect becomes more significant as the concentration increases. For this reason, the effect of salicylic acid cannot sufficiently be demonstrated as solutions at a high concentration.

The ointment form is not suited if the affected areas are wet even though the stimulating effect is low. Ointments easily contaminate clothes. The affected areas also easily become unclean. The ointment form has a lower effect than that of the liquid form.

The inventor eagerly studied on a dermatophytosis that contains salicylic acid as a main agent. As a result, the inventor has discovered that salicylic acid liquidizes with a specific ointment base agent. However, in this case, when the air temperature decreases,

for example, to 18°C or lower, the liquid turns white according to the amount of salicylic acid contained. In order to solve this problem, the inventor has also discovered that the cloudiness is prevented by adding ethanol at a small amount at about 10 weight %. Finally, the inventor has succeeded to produce an extremely effective liquid dermatophytosis remedy that overcomes the aforementioned disadvantages of the salicylic acid formula and that contains a lower amount of alcohol.

In detail, the invention offers a liquid dermatophytosis remedy and a method for preparation thereof, characterized in that polyethylene glycol at 3000 to 5000 molecular weight and polyethylene glycol at 300 to 500 molecular weight are mixed with each other at an almost equivalent amount; using the weight of the mixture as a reference, salicylic acid at up to about 30 weight % is added to the mixture and dissolved by a heating means; using the total weight of the mixture as a reference, ethanol at about 10 weight % is further added.

The dermatophytosis remedy of the invention is a colorless, transparent and slightly viscous liquid. It is applied on affected areas 2 to 3 times a day. The remedy hardly demonstrates a stimulating effect and an extremely significant effect on both dry and wet dermatophytosis.

An example of the applications is indicated as below.

Symptom	Number of treated patients	Treating days	Number of completely cured patients	Number of uncured patient	Note
Light	80	7 to 10 days	80	0	
Relatively heavy	5	80 days	5	0	
Heavy (Over 10 years)	5	About 6 months	4	1	The symptom of the uncured patients is also significantly improved.

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10/08/03
Chisato Morohashi